

TEXAS INTERNATIONAL AIRLINES LOFT PROGRAM

Captain Jack Sommerville

As a preface, we do have a different program than those that have been described here today. Initially, we had a similar program which we called "Recurrent, Day One," where we provided them with two hours of ground training, discussing manual changes and so forth. We then briefed the crews for an hour, and took them into the simulator for four hours, where they underwent what we are now calling LOFT--a no jeopardy exercise. Since that time, we have evolved a somewhat different program which I will try to describe to you.

As you know, the program must be acceptable under FAR 121.409, which sets forth the guidelines for LOFT-type training programs. The training time set forth is four hours, three hours and twenty minutes of which must be conducted in a LOFT-type situation. The remaining time may be utilized for whatever other work may be necessary. This four hour period does not include the briefing and debriefing time. Incidentally, we have also used the forty minute period before the LOFT segment.

A complete crew is required--captain and a qualified first officer--for our DC-9 aircraft. The captain may sit in the right seat if he is still qualified as a first officer. We have found this to be problematic in some cases, so we do not place some of the old veterans, who have been flying nothing but captain all their lives, in the first officer's seat.

The scenario should be completely representative of the actual line operation and involve abnormal and emergency procedures. All of our instructors or check airmen are line-qualified pilots. By the way, if we do not have a complete crew available for our LOFT-type PC (proficiency check), they receive training in lieu of that under the FAR.

In accordance with the guidelines, we have incorporated a line-oriented flight training program which allows the crew to work as a team to solve all problems, abnormal or emergency, within the crew concept. I should emphasize that the term LOFT does not really fit our type of program. Perhaps we should call it L-O-C-R for line-oriented check ride. The program utilized by Texas International takes place every six months for the pilot as a proficiency check. There are advantages and disadvantages to this program. One disadvantage is that since it is designed as a check-ride, the scenarios must be structured so that the average pilot will complete the check-ride without complication. This system is different from a proficiency check where you can stop at a problem area and train to proficiency before proceeding with the check. Within the LOFT context, you

cannot stop once the scenario has begun. I consider this a disadvantage since the pilot is checked once every six months and expected to perform with perfection. I think this problem could be alleviated by utilizing time in the simulator prior to the check--give the crew two, maybe four, hours of time the day before the check-ride--allowing them an opportunity of flying the airplane to get their procedures polished, feel more comfortable, and possibly prevent "checkitis."

As I said earlier, another disadvantage of the LOFT concept in our type of program is that in designing the scenario, it is difficult to be fair and keep the program interesting for all concerned. You must tailor the scenario to the average pilot's ability. This means that, on occasion, you will find the above average pilot being bored due to the fact that they are not being challenged. On the other hand, you might find a below average pilot having a great deal of difficulty completing the program satisfactorily. The instructor does not have the option of changing the scenario while checking.

There are advantages to the LOFT program. Assuming that the scenario is well-planned, this type of training is much more interesting, more realistic, and a better demonstration of competence, while at the same time providing more insight into cockpit duties, responsibilities, and the importance of crew coordination. There is also the advantage, since this is a check-ride as far as the requirements are concerned, you are not required to administer a line-check in the airplane.

In our LOFT scenarios, we provide experience in very real problem areas including gross weight problems, takeoffs at high temperatures, power failures using specific engine-out procedures. For example, you can structure a segment around an airport with unique engine-out procedures-- a situation requiring prior planning. In the high altitude segment, you can provide experience in drift-down procedures that have been practiced. Other segments can provide practice and review of such areas as short runway operations, wet runway rules, cross-wind conditions, and so forth.

The problem inputs are designed to involve both crew members. Our flight crew operating manual is designed with the duties and responsibilities of each crew member specifically designated, and this should be demonstrated by the crew. The selection of "abnormals" is one of the most difficult aspects of scenario design. The problem must be realistic and workable and should be inserted at appropriate times so that analysis and action may be accomplished. We try to design scenarios so that while completing the required procedures, hopefully both pilots will learn and receive a refresher about the duties, responsibilities, and actions required in a given situation.

All communication frequencies, identifiers, and so forth are provided to the instructor in conjunction with those appropriate for the specific phase of flight. All the necessary paperwork is provided to the flight crew just as it would be on an actual line flight. Normally, I will fly the actual route-segment before designing a scenario for that route and collect all the required paperwork and other information. Changes are made when necessary to provide the desired emphasis. For instance, the weather may be modified and fuel loads may be changed, so the dispatch releases and weight and balance papers are altered accordingly. We find this to be easier in making the scenarios realistic.

Line-pilots are asked to comment on all scenarios after they have flown them for their inputs and constructive comments. However, any revisions must be approved by the FAA.

As I said earlier, the briefing is begun one hour prior to the scheduled simulator period. Someone commented earlier that on some airlines you receive a 24 hour advance notice of the route you are going to fly if you are on reserve. At Texas International you are lucky if you get 30 minutes-- well, maybe an hour and 30 minutes. The briefing is initiated by giving the crew the necessary papers for the first leg of flight. The instructor informs the crew of the ground rules for the session--the do's and don't's. All communications must be accomplished by use of radios or by requesting communication with maintenance, dispatch, or an agent, etc. The instructor pilot is required to stay functionally out of the cockpit in order to maintain as much realism as possible. The crew is informed that the simulator will not be frozen and that all equipment and aircraft functions are available unless notified otherwise.

The instructor may not deviate in any way from a scenario unless absolutely necessary. However, if a simulator malfunction should cause an undue hardship, the instructor will make himself available to answer questions. The instructor utilizes the control panel to insert any special effects which are available such as visual traffic, turbulence, lighting, or any other effects to increase the sense of realism. Should the crew request a deviation from the flight plan, it is left up to the instructor to decide whether the deviation would be acceptable and allow the objectives of the scenario to be accomplished. For example, if the crew requests to land at airport X and this is unacceptable, the instructor pilot as ATC may say, "Unable due to power failure at airport X." Any realistic reason may be utilized by the instructor. On certain segments, simulator position may be altered if that option is designed into the scenario, but in these cases we make sure that the crew is aware of the change. However, in some cases, this

does detract from the realism of the scenario so we try to avoid this procedure as much as possible.

For the purpose of the debriefing and performance evaluation, instructors are encouraged to make detailed notes throughout the course of the session. The first order of business in the debriefing is to allow each crew member to debrief the other. The captain, in particular, is encouraged to debrief the first officer. Upon completion of the crew's discussion, the instructor commences a thorough debriefing based on his notes. All aspects of the flight, from initial preparation, weather review, cockpit pre-flight, check lists, start, taxi, and so forth are all covered. Compliments on good procedures are very important and allow a better acceptance of comments regarding poor procedure. The lessons learned are very apparent in the debriefing. Allowing the crew members to express their opinions usually results in detailed discussion and a continuation of the learning process. Special emphasis should be placed on cockpit situations which have been devoid of teamwork. A lack of teamwork usually shows up in terms of increased workload and confusion in completing or correcting a problem.

On some occasions, one or both crew members will show up for the session unprepared. If this is true, it always shows up during the session. It is left up to the discretion of the instructor as to how far they will be allowed to deviate, but basic guidelines are provided to instructors, and the crew must perform in a safe, reasonable, and efficient manner. The quality of our check-pilots allows me to give them a free hand in this area. In the event of a "bust," the individual is required to train to proficiency, and is then required to perform a full proficiency check observed by a check-pilot and the FAA.

On the training and qualifications of LOFT instructors, I realize that during the next few days we will undoubtedly consider definite guidelines for instructor qualifications, but at Texas International, the basic qualification is that an instructor be a line-qualified pilot. Each instructor is briefed on what and what not to do, the accepted procedures, and ideas based on a cockpit resource management seminar we held last year. We do not have formal training program centered around more sophisticated training and observational techniques.

We do not use LOFT for any other purpose than to replace the standard proficiency check. I would like to address some of the earlier comments that have been made at this workshop. I feel that the real key to a LOFT-type training program is making it acceptable to flight crews, and I suppose you are wondering now how we made LOFT as a check-ride acceptable to our crews, but they are accepting it. We also have a wonderful

relationship with the FAA in Houston. They watch and observe what we do, but they also help us in any way they can.

There was another comment made earlier about how you make sure that someone does not repeat a scenario that they have already done. We make sure that they do not by recording on the pilot's training record that he has been given LOFT No. XX on a given date. Every six months, we design two more scenarios, and we have four up-to-date scenarios at any given time. Incidentally, I do not feel that having pilots spread the word about a given scenario is all bad. It can be an advantage. One of our scenarios incorporates the incapacitation of the captain. I gave one crew this scenario and the first officer was unprepared for it. He was a good pilot, but he just laid back on this particular check-ride. At 2,000 ft., the captain was incapacitated, and the copilot just sat over there looking at the radio to see if it was tuned--looking everywhere except at what the airplane was doing. When he finally realized where he was--at 200 ft.-- he could not recover. The next day, everyone on the line knew about it. We did not "bust" him for that one particular thing. He was unprepared, but the point is, the rest of the pilots knew about it, and started talking, "Well, what about incapacitation?" I think that was a real advantage.

Discussion

CAPTAIN CAVANAGH: Jack, from our understanding, a captain still takes a PC and the other six-month period he takes your LOFT type program? Is it in lieu of recurrent training?

CAPTAIN SOMMERVILLE: It is in lieu of a proficiency check. It is a check-ride. The LOFT we give in one six-month period is a check-ride, and the next six-month period, he will get a proficiency check.

CAPTAIN CAVANAGH: How about first officers?

CAPTAIN SOMMERVILLE: First officers are scheduled each time. The first officers are getting one LOFT and one PC a year.

DR. LAUBER: I have a significant concern as a result of something you said, Jack. I think maybe now is the time to agree on some critical terminology with regard to LOFT and check-rides because we are getting into a situation of talking about them interchangeably. From what we have seen in these presentations, they are not the same, and we must keep the distinctions in mind. Can we adopt the terminology that if we are talking about a line-oriented check-ride or the use of the full-mission simulation approach to check-rides, that it is a line-oriented check-ride. We should not refer to it as LOFT because it is not. When we are talking about a training

application of full-mission simulation, whether it is recurrent, upgrade, initial, or whatever, as long as it is a training application; we refer to it as LOFT. Is that a fair way of dealing with this issue?

CAPTAIN ESTRIDGE: I agree, John. I am still a little confused, Jack. Is the line-oriented check-ride in compliance with FAR 121, Appendix F, or AC 120-35?

CAPTAIN SOMMERVILLE: We have the approval of FAA in Houston to use this as a check-ride in lieu of a proficiency check by using our procedures.

CAPTAIN ESTRIDGE: Then it has to be FAR 121, Appendix F.

CAPTAIN SOMMERVILLE: They consider it to cover that, yes sir.

CAPTAIN NUNN: Jack, I would like to carefully clarify this check-ride usage. Is it approved by your local FAA under AC 120-35? If it is, I do not know how they did it, because that is definitely a training exercise, not a checking exercise. In fact, the Advisory Circular (120-35) refers to it as a training exercise. It must be satisfactorily completed, but it is not a check-ride.

CAPTAIN SOMMERVILLE: I cannot give you a number. I would have to call Mr. McCabe (TXI FAA POI) in Houston to find out, and I will do that.

MR. DAN BEAUDETTE: Can you do two line-oriented checks a year for a captain--must the other one be a full-mission simulation?

CAPTAIN SOMMERVILLE: It must be a full basic.

MR. BEAUDETTE: Okay, most likely it is not a proficiency check, and the FAA office has not approved it. I am not sure how they would have gotten it to this point because it is not a substantial Appendix F check-ride.

CAPTAIN SOMMERVILLE: I think that the way to get around this is check it out and get an answer from the Houston FAA. You can give training in lieu of a PC and all the things you do in a PC--you only must accomplish everything on the list.

CAPTAIN ESTRIDGE: My question is related to the statement you made about the line-check. How do you get credit for a line-check?

CAPTAIN SOMMERVILLE: When you give a PC, you are required to give a line-check. When you give training in lieu of, or LOFT under the rules set forth down at the Houston office, we do not have to give the line-check.

CAPTAIN NORMAN: This question is directed toward Dale (Cavanagh). How is your LOFT program approved in the current situation?

CAPTAIN CAVANAGH: We are complying with the FAR in that we do all the maneuvers required under Appendix F as recurrent training in lieu of a PC. We spend the four hours that are required under FAR 121, and we devote time to a line segment or LOFT.

CAPTAIN NORMAN: That is not under the Advisory Circular, is it?

CAPTAIN CAVANAGH: That's right. It is generic "small letter" LOFT. It is not LOFT, Advisory Circular. I think there are distinctions to be made to the use of the term LOFT.

DR. LAUBER: All of this underscores the necessity for you as a group to come to terms with the question of terminology and nomenclature.

MR. WARRAS: This may also be a question of terminology, Jack, but you mentioned that if a pilot comes unprepared for a LOFT, I assume you meant unprepared for a line-oriented check-ride.

CAPTAIN SOMMERVILLE: That is correct.

CAPTAIN BEACH: What do you mean, he is not prepared, period?

CAPTAIN SOMMERVILLE: For example, if a pilot comes for a LOFT or LOCR, or whatever you want to call it, and the other crew member does not show up; that pilot must be given a PC or training in lieu of, instead of a LOFT. If he takes training in lieu of, it is still the same as if he took LOFT, as least as far as paperwork goes. He still does not need to have a line-check. If he takes a proficiency check, then he must have a line-check. When I say unprepared, I mean that he is prepared to take the LOFT, but now he is going to take training in lieu of, or a PC. They are told in advance that there is always the possibility that LOFT may not go and to be prepared for a PC.

DR. JOHNSON: Jack, earlier you said that you had some better than average pilots, but your LOFT is geared to the average pilot, and you wished that you could adjust for that. What would you do for the less than average pilot?

CAPTAIN SOMMERVILLE: He has to be trained, if he cannot get through it. We are working somewhere on the curve, and we would not design a separate check-ride for him.

DR. JOHNSON: Would you adjust it to his level?

CAPTAIN SOMMERVILLE: No, once the scenario is designed, it is for the average pilot. You may find in some cases that he gets extra help from the other crew member. If it gets to the point where the individual cannot function safely--that is the number one priority for this whole thing--he is going to have to have more training.

DR. JOHNSON: So you would adjust it in that sense.

CAPTAIN SOMMERVILLE: Well actually it amounts to a "bust." The FAA does not dictate the conditions, and it is left to our discretion.

CAPTAIN ESTRIDGE: I think I can clear up a point. If training in lieu of is done under FAR 121, Appendix F, if training in lieu of is substituted, there are no line landings required. But, you do a PC, then there are line landings required. You must not be talking about the annual line-check required for an airman under FAR 121-F.

CAPTAIN SOMMERVILLE: That is right. An annual line-check is still required, but that coincides with the proficiency check that he has.

CAPTAIN ESTRIDGE: Okay, that's the point--it's solved.